

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Grubbs, et. al.

Examiner: Nazario-Gonzales, P.

Serial No.: 09/576,370

GAU: 1621

Filed: May 22, 2000

## GRUBBS DECLARATION

For: Imidazolidine-Based Metal  
Carbene Metathesis Catalysts

## Certificate of Facsimile Service

I hereby certify that this correspondence is being sent via facsimile to: Fax No.: (703) 308-4556,  
Commissioner for Patents, Washington, D.C. 20231,  
on October 9, 2002

Nicolle S. Bradley

I, Robert H. Grubbs, declare and state as follows:

1. This Declaration is submitted as evidence that the following reference ("the Reference") which was cited in the above-identified patent application, 09/576,370, ("the Application") is not enabling for the invention disclosed and claimed in the Application:

Hermann et al. "A Novel Class of Ruthenium Catalyst for Olefin Metathesis"

Abstract: 11<sup>th</sup> International Symposium on Homogeneous Catalysis, University of St. Andrews, Scotland U.K. July 1998.

2. I hold a Ph.D. in Chemistry, which I received in 1968 from Columbia University.
3. I am a joint inventor with Mathias Scholl of the invention disclosed and claimed in the Application.

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4. Upon information and belief, at the time that the Reference was drafted, neither Dr. Herrmann nor Dr. Weskamp had invented the unsaturated catalyst shown in the structure identified as structure 1 ("Structure 1").

5. At the time of the Application, one of ordinary skill in the art would have realized that there was an error in the drawing of the compound shown in Structure 1. Specifically, one of ordinary skill in the art would have realized that through a typographical error the second Arduengo-type carbene moiety shown in Structure 1 is erroneously lacking a double bond.

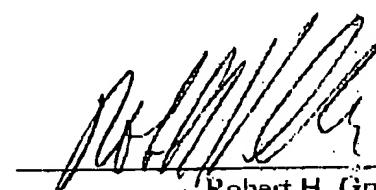
6. At the time of the Application, one of ordinary skill in the art would have realized that the saturated carbene shown in Structure 1 was a typographical error. Specifically, the reference abstract states that the compounds such as the compound of Structure 1 may be prepared with "Grubbs' phosphine complex RuCl<sub>2</sub>(PPh<sub>3</sub>)<sub>2</sub>(=CHPh)<sub>2</sub> and the appropriate 1, 3 disubstituted imidazolin-2-ylidene [citation omitted]." One of ordinary skill in the art would know that 1, 3-disubstituted imidazolin-2-ylidenes are unsaturated carbenes. Because unsaturated carbenes are named as appropriate starting materials for forming the compound of Structure 1, one skilled in the art would have realized that the saturated carbene shown in Structure 1 was a typographical error.

7. At the time of the Application, one of ordinary skill in the art, upon reading the Reference abstract, would have realized that there was an error in the drawing of Structure 1. Specifically, the abstract states that "we present the first ruthenium-based examples of general structure 1 as a novel class of organometallic compounds containing ... N-heterocyclic carbene (Arduengo-type carbene) moieties. [citation omitted]" One of ordinary skill in the art would know that such Arduengo-type ligands are unsaturated.

8. At the time of the Application, the Reference would not have taught one of ordinary skill in the art how to make the compound shown in Structure 1, because, among other reasons, the reactants disclosed in the Reference would not form the compound shown in Structure 1.

9. At the time of the Application, the Reference would not have taught one of ordinary skill in the art how to make the compound shown in Structure 1, because, among other reasons, the Reference does not teach how to form a compound having both a saturated and an unsaturated ligand.

10. I hereby declare that all statements made of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the patent application and any patent issued thereon.



Robert H. Grubbs, Ph.D.

Oct 3, 2002  
(Date)